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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,386	07/29/2003	Yassin Aden Awad	7052062001	6529
23517 7590 10/17/2007 BINGHAM MCCUTCHEN LLP 2020 K Street, N.W. Intellectual Property Department WASHINGTON, DC 20006			EXAMINER VU, MICHAEL T	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/629,386

Applicant(s)

AWAD ET AL.

Examiner

Michael Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/29/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 07/29/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Regarding claim 10, the phrase "wherein the or each the amount...". This is not clearly claim language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogensen (US 2004/0105460) in view of Larsson (US 5,241,690).

Regarding **claims 1, 19, 20, 21, 22 and 23**, Mogensen teaches an adaptive modulation and coding [0004] method comprising: selecting one of a plurality of different available modulation and coding levels to apply to a signal transmitted from a transmitter to a receiver [0004-0005, 0038-0042], the selection being based on a comparison between a signal transmission quality and a threshold value [0015-0016, 0046]; and

But Mogensen does not clearly teach on adjusting the threshold value when the signal transmission quality is within a predetermined range of the threshold value, and maintaining the threshold value unchanged when the signal transmission quality is outside that range.

However, Larsson teaches a method for regulating the transmission power of a mobile station or a base station in a manner such that said power will be constantly maintained at an optimum. In brief, the method involves collecting measurement values of signal strength and signal transmission quality over two mutually adjacent time periods from the present or instant time-point and backwards. The mean values of signal strength and of signal transmission quality are calculated and estimated on the basis of these measurement values. An anticipated value of the signal level and of the quality of the signal transmission at the next point in time are calculated with the aid of

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the aforesaid calculated mean values, while taking into account the environment in which the mobile station is located, provided that the transmission power is **maintained unchanged** in relation to the power transmitted at the present point in time. The transmission power is finally regulated with the aid of the anticipated values of transmission quality and signal level, so that the power transmitted at the next point in time is increased when the anticipated transmission quality is poorer than that desired, and is decreased either when the anticipated value of transmission quality is higher than the highest permitted quality or when the anticipated value of the signal strength is greater than the maximum permitted value, the transmission power otherwise being maintained unchanged (See Col. 1, line 65 through Col. 3, line 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mogensen, such that adjusting the threshold value when the signal transmission quality is within a predetermined range of the threshold value, and maintaining the threshold value unchanged when the signal transmission quality is outside that range, to actual adjustment and/or to control of the transmission power in radio communication between a mobile station and a base station for avoiding those disturbance and/or interference occurs.

Regarding **claim 2**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the signal transmission quality is a signal-to-interference ratio [0045] of Mogensen.

Regarding **claim 3**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the signal transmission quality is measured by the receiver [0045-0046] of Mogensen.

Regarding **claim 4**, Mogensen/Larsson teach a method as claimed in claim 1, wherein in the adjusting step the threshold value is increased by an upward amount when the signal is not received successfully by the receiver, and is decreased by a downward amount when the signal is received successfully by the receiver (See Col. 1, line 65 through Col. 3, line 31, and Col. 7, line 34 through Col. 8, line 67) of Larsson.

Regarding **claim 5**, Mogensen/Larsson teach a method as claimed in claim 1, wherein in the adjusting step the threshold value is increased by an upward amount when the signal received by the receiver fails a cyclic redundancy check, and is decreased by a downward amount when the received signal passes the cyclic redundancy check (Col. 7, lines 34 through Col. 8, line 61) of Larsson.

Regarding **claim 6**, Mogensen/Larsson teach a method as claimed in claim 4, wherein the upward amount is different from the downward amount (See Col. 1, line 65 through Col. 3, line 31) of Larsson.

Regarding **claim 7**, Mogensen/Larsson teach a method as claimed in claim 6, wherein the downward amount is smaller than the upward amount (See Col. 1, line 65 through Col. 3, line 31) of Larsson .

Regarding **claim 8**, Mogensen/Larsson teach a method as claimed in claim 4, wherein a ratio of the downward amount to the upward amount is dependent upon a

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target error rate of the received signal (Col. 4, line 54 through Col. 6, line 60) of Larsson.

Regarding **claim 9**, Mogensen/Larsson teach a method as claimed in claim 4, wherein the downward amount and/or the upward amount is/are dependent upon a difference between the threshold value and the signal transmission quality (Col. 2, line 53 through Col. 6, line 60) of Larsson.

Regarding **claim 10**, Mogensen/Larsson teach a method as claimed in claim 9, wherein the or each the amount increases as the difference decreases (Col. 2, line 53 through Col. 6, line 60) of Larsson.

Regarding **claim 11**, Mogensen/Larsson teach a method as claimed in claim 1, having a threshold value for each pair of adjacent the levels, and in the selecting step the selection is based on a comparison between the signal transmission quality and the threshold values (Col. 2, line 53 through Col. 6, line 60) of Larsson.

Regarding **claim 12**, Mogensen/Larsson teach a method as claimed in claim 11, wherein each the threshold value is adjusted only when the signal transmission quality is within a predetermined range of the threshold value concerned [0046-0051] of Mogensen.

Regarding **claim 13**, Mogensen/Larsson teach a method as claimed in claim 12, wherein the predetermined range for at least one the threshold value is different from the predetermined range for another the threshold value [0039-0051] of Mogensen.

Regarding **claim 14**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the adjusting step and the selecting step are carried out in the receiver, and the receiver reports the selected level to the transmitter (Col. 3, line 13-31) of Larsson.

Regarding **claim 15**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the receiver reports the signal transmission quality to the transmitter, and the adjusting step and selecting step are carried out in the transmitter (Col. 2, line 53 through Col. 6, line 60) of Larsson.

Regarding **claim 16**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the selecting step is carried out after the adjusting step, and in the selecting step selection of a higher level, if indicated by the comparison between the signal (See Col. 1, line 65 through Col. 3, line 31) of Larsson.

Regarding **claim 17**, Mogensen/Larsson teach a method as claimed in claim 1, wherein the transmitter is a base station of a wireless communication system, and the receiver is a user equipment of the system (Col. 1, line 11-63) of Larsson.

Regarding **claim 18**, Mogensen/Larsson teach a method as claimed in claim 17, wherein the signal is a downlink packet access signal [0022] of Mogensen.

Conclusion

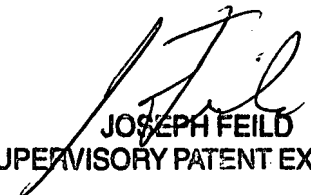
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571) 272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Vu
Examiner



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER